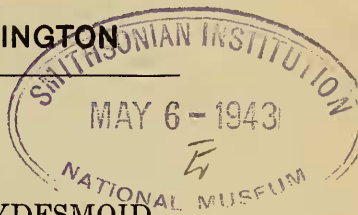


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON



ON NINE NORTH AMERICAN POLYDESMOID
MILLIPEDS.

BY RALPH V. CHAMBERLIN.

The types of all but one of the nine species here described are in the Field Museum of Natural History to the officers of which I am indebted for the privilege of studying the milliped collection of that institution. The ninth species, *Tidesmus hubbsi*, is a cave-dwelling form represented by specimens recently taken by Dr. Carl L. and Earl L. Hubbs. These specimens, for which I thank Dr. Hubbs, are at present in the author's collection.

Genus **TIDESMUS**, new.

Composed of head and twenty segments. Like *Polydesmus* in having on each ordinary tergite three transverse rows of well-defined elevated areas or tubercles. Differing from *Polydesmus* in narrower keels and in having these much shorter, mostly shorter than or equal to the middle part of metazonite, longer only in posterior region. Prozonites well exposed, giving body a submoniliform appearance.

Gonopods of male with coxal division large, with hook ending in cavity in basal part of distal division; distal division with axis oblique to that of coxa, with a long, slender accessory process from base typically expanded at tip. (See further figures of genotype).

Genotype.—*Tidesmus episcopus*, new species.

The name of this genus is derived from the Gosiute Indian *tida*, meaning small ÷ *desmus*. *Microdesmus* was first considered but could not be used as it was previously employed in the Diplopods by Verhoeff (1901), and still earlier (1864) in fishes by Guenther. A new name must be given for Verhoeff's genus and, accordingly, *Nannodesmus* nom. nov., is here proposed.

Tidesmus episcopus, new species.

A small form of the usual brown color in which the keels, at least in the Preserved types, do not appear especially lighter than the mid-dorsum. Legs lighter brown or yellowish.

Keels short, with posterior corners rounded or at most subrectangular on segments in front of 15th; posterior corners of 15th and following keels moderately produced caudad; no tooth on anterolateral corner, the lateral serrations behind these small but distinct and of usual number. (See fig. 1). Dorsal tubercles and setae normal.

Gonopods of the male as represented in figs. 2 and 3.

Length, about 9–9.5 mm.; maximum width, .85 mm.

Locality.—California: Los Angeles, Bishop's Road, Reservoir Hill. January 2, 1939. Four specimens taken by Gordon Grant.

Tidesmus hubbsi, new species.

White in color throughout. Head clothed with short, straight, apically pointed setae, which are most numerous above and down front. Antennae clavate.

Collum with anterior margins strongly convex, the posterior less convex the two margins meeting at each end in an angle; three transverse series of tubercles, each of which bears a short clavate seta.

Metatergites of anterior and middle region of body without obvious transverse sulcus, having three transverse series of well-developed tubercles, each having at its caudal elevated apex a short clavate seta. Keels somewhat shorter than the middle part of metatergite, those of posterior region longer; posterior corners not produced, rectangular; lateral margin with three small setiferous teeth. In posterior keels the corners moderately produced caudad, the lateral teeth slight. (See fig. 4). Last tergite triangular, decurved, bearing longer acuminate setae.

Length, 5 mm.; width, .43 mm.

Locality.—Nevada: Northern Lincoln Co., deep in cave of Cave Valley. Several females taken June 25, 1942, by Carl L. and Earl L. Hubbs.

Polydesmus conlatus, new species.

Dorsum dark brown with the keels abruptly lighter, yellowish, sometimes of a brick-red cast. Antennae dark brown to blackish, legs light brown.

Keels with lateral serrations minute, in part almost obliterated with margins there nearly smooth.

The male gonopods are distinctive. (See fig. 5.)

Length of male holotype, about 20 mm.; width, 3.8 mm.

Localities.—Tennessee: Great Smoky Mts. National Park, Gatlinburg. June 13–19, 1942. Several males and females taken by H. Dybas.

Georgia: Thomasville, Chakri. April 2, 1940. A male and female taken by Dr. F. Field.

Polydesmus modocus, new species.

Dorsum brown, with the keels not definitely paler.

Collum with a small lateral serrature.

Keels broad, with serrations well developed. Dorsal surface of metazonites with the usual elevated areas, these low, rounded and shining.

Best differentiated by the gonopods of the male, the principal features of which are shown in fig. 6.

Length of male holotype, 18 mm.

Locality.—Illinois: Randolph Co., between Modoc and Roots, April 14, 1936. One male. K. P. Schmidt.

A species close to *P. hubrichti*, occurring in Missouri and Arkansas. The gonopods of male are very similar to those of that species but seem to differ in having a pencil of setae proximad of the second tooth from tip in place of a single spine.

Aporiaria fumans, new species.

Dorsum typically solid black, with posteriolateral portion of keels yellow. Legs yellow to yellowish brown. Antennae with articles blackish distally, brown proximally.

Sternites and coxae excepting those of the second legs, without processes. Processes of second coxae short and rounded. Distal spines of second joint of legs in anterior pairs short and obtuse, but normally prolonged and acute on posterior pairs.

Distinguished especially by the details of the gonopods, the two-pointed apex of telopodite being especially characteristic (See fig. 9.).

Length of male holotype, 26 mm.; width, 5 mm.

Locality.—Tennessee: Great Smoky Mts. National Park, Greenbriar Cove, June 13–19, 1942. One male and one female collected by H. Dybas.

Aporiaria brunnior, new species.

This, the smallest of the known species of the genus, has the dorsum brown with keels and a transverse band over caudal border of metazonites yellow, thus contrasting with the other known species in which the dorsum is black. Antennae and legs light.

Kells without anterolateral denticle, the margin being smooth throughout; posterior corners produced beginning with the 5th or 6th, the production becoming more pronounced in posterior segments as usual.

All coxae without spines.

Gonopods of male as shown in fig. 10.

Length of male holotype, about 20 mm.; width, 4 mm.

Locality.—Tennessee: Gt. Smoky Mts. Nat. Park. June 5, 1941. One male taken by J. Miller.

Epeloria fictus, new species.

The colors are faded in the poorly preserved holotype, but the dorsum appears to have been light brown, with the keels yellow.

A smaller form than *E. talapoosa*, the genotype, from which the differences in the gonopods of the male are conspicuous, especially noticeable being the divergence of the two terminal branches of the telopodite. See fig. 11.

Coxae of legs not spined as in *bifidus*.

Width, 6.5 mm.

Locality.—Georgia: Thomasville, Chakri. April 5–10, 1940. A male and female taken by Dr. H. Field.

***Eurymerodesmus schmidtii*, new species.**

A relatively large form in which the metatergites are brown with keels and a transverse caudal band, conspicuously widening from ends to middle are lighter.

Prozonites paler above, darker at sides. Legs brownish yellow, the antennae brown.

Nineteenth keels with processes distally rounded, the 18th and preceding ones nearly acute.

Distinguished primarily by differences in form of telopodite of male gonopods and the number and grouping of setae on the same. See fig. 7.

Width, 5.8 mm.

Locality.—Arkansas: Polk Co., Rich Mts., El. 2,400 feet., March 22, 1938. Ten specimens, in part immature; also 4 specimens 4 mi. east of Hotel site on Rich Mt., El. 2,800 feet, March 21, 1938. All specimens collected by K. P. Schmidt.

***Eurymerodesmus dubius*, new species.**

Metazonites somewhat chocolate colored, with keels and a narrow stripe across posterior border lighter. Yellow in preserved specimens. Prozonites lighter in a geminate median area, darker at sides. Legs yellow proximally, darker distally. Keels with anterolateral tooth absent, as usual, the margin wholly smooth. Processes of posterior keels well developed, distally rounded.

Distinguished especially by the gonopods of male which are short, with distal blade small and erect as shown in fig. 8.

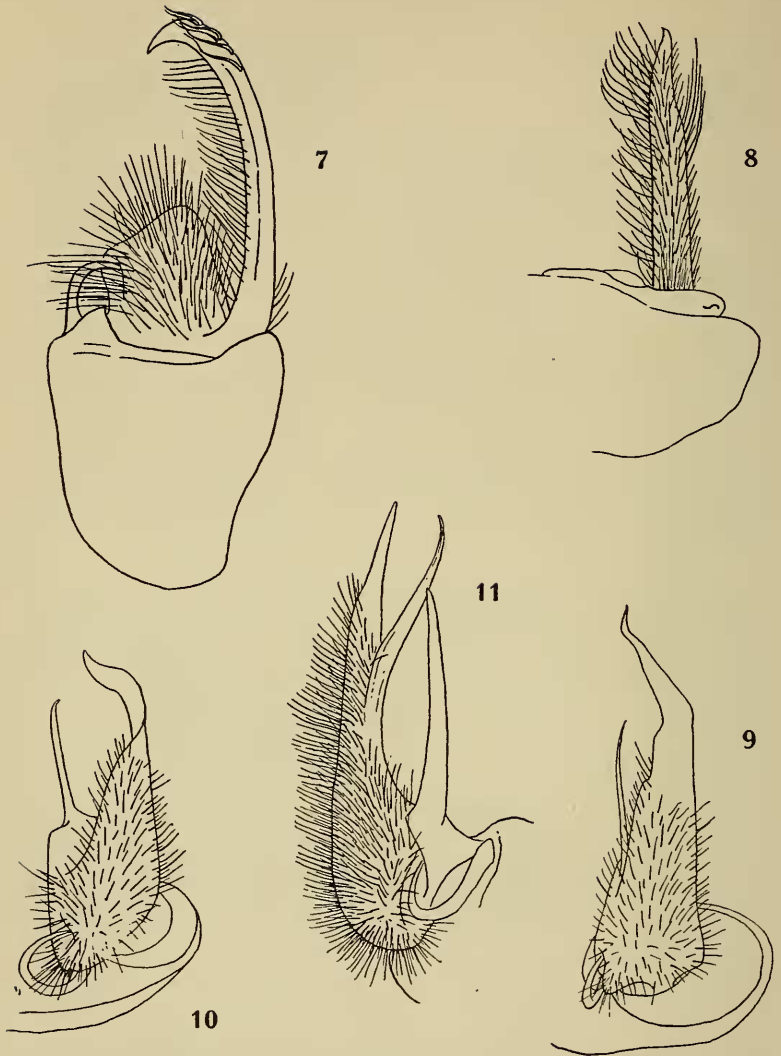
Width, 5.6 mm.

Locality.—Arkansas: Pike Co., Delight. April 16, 1941. One adult male and an immature specimen taken by K. P. Schmidt.



I.

- Fig. 1. *Tidesmus episcopus*, sp. n. Right keel of 6th segment.
 Fig. 2. The same. Right gonopod of male in situ, anterior view.
 Fig. 3. The same. Left gonopod of male, mesal view.
 Fig. 4. *Tidesmus hubbsi*, sp. n. Right keels of 18th and 19th segments.
 Fig. 5. *Polydesmus conlatus*, sp. n. Left gonopod of male, mesal view.
 Fig. 6. *Polydesmus medicus*, sp. n. Right gonopod of male, coxal division omitted, mesal view.



II.

Fig. 7. *Eurymerodesmus schmidti*, sp. n. Gonopod of male, subanterior view.

Fig. 8. *Eurymerodesmus dubius*, sp. n. Gonopod of male.

Fig. 9. *Aporiaria fumans*, sp. n. Left gonopod of male, ventral view.

Fig. 10. *Aporiaria brunnior*, sp. n. Left gonopod of male, view a little mesal of ventral.

Fig. 11. *Epeloria ficta*, sp. n. Right gonopod of male, mesal aspect.